

Disclaimer:

This English translation is produced by machine translation and may contain errors. The JPY, the INPT, and those who drafted this document in the original language are not responsible for the result of the translation.

Notes:

1. Untranslatable words are replaced with asterisks (***).
2. Texts in the figures are not translated and shown as it is.

Translated: 04:10:44 JST 12/11/2008

Dictionary: Last updated 12/10/2008 / Priority:

CLAIM + DETAILED DESCRIPTION

[Claim(s)]

[Claim 1] In the method of dry distillation processing mainly removing a resinous principle from a compound aluminum sash, and collecting the aluminum scrap wood contained When said resinous principle makes vinyl chloride system resin a subject, it dry-distills by non-oxygen environment. When said resinous principle makes urethane system resin a subject, it dry-distills by non-oxygen environment at first. The scrap wood recycling method of the compound aluminum sash characterized by introducing oxygen or air in this system, switching to owner oxygen environment, and carrying out combustion removal of the resin residual substance after introducing inactive gas after the completion of dry distillation, and in a system and exhausting the remains cracked gas in this system.

[Claim 2] In the scrap wood recycling method of a compound aluminum sash according to claim 1 when said resinous principle makes vinyl chloride system resin a subject After removing hydrogen chloride, chlorine, and oil which are contained from the cracked gas which occurs at the time of dry distillation, The scrap wood recycling method of the compound aluminum sash which carries out direct combustion processing of the cracked gas which occurs at the time of dry distillation, and is characterized by emitting to the atmosphere through a water shower further when combustion processing of the cracked gas is carried out, it emits to the atmosphere and said resinous principle makes urethane system resin a subject.

[Claim 3] The thermal cracking room which stores the scrap wood of the compound aluminum sash containing the resinous principle which was equipped with the source of heating and stored by the cassette container, When it connects with said thermal cracking room and said resinous principle makes vinyl chloride system resin a subject When said thermal cracking room is blocked, it changes into a non-oxygen state and said resinous principle makes urethane system resin a subject The change valve which changes said thermal cracking room into a non-oxygen state at first, and is changed into an owner oxygen state after the end of dry distillation, The inactive gas feed unit connected to the change valve for inactive gas supply filled with inactive gas at said thermal cracking room before said owner oxygen state in case said resinous principle makes urethane system resin a subject, and this change valve for inactive gas supply, When it connects with the outlet of the cracked gas of said thermal cracking room and said resinous principle makes vinyl chloride system resin a subject The neutralization equipment from which the oil contained by lowering the temperature of this cracked gas is removed while performing neutralization processing of said cracked gas, Deodorization equipment equipped with the water shower which carries out water cooling of the exhaust gas from the cracked gas combustion furnace which

carries out combustion processing of the cracked gas emitted directly through said neutralization equipment, and this cracked gas combustion furnace, and when said resinous principle is urethane system resin Scrap wood recycling equipment of the compound aluminum sash characterized by having the bypass valve which leads the cracked gas from said thermal cracking room to said deodorization equipment directly without minding said neutralization equipment.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the scrap wood recycling method of the compound aluminum sash corresponding to diversification of resin in a compound aluminum sash, and its equipment.

[0002]

[Description of the Prior Art] When collecting aluminum from compound aluminum sash scrap wood, it is necessary to remove first the resin currently used for the compound aluminum sash. Although the incineration processing method has generally been carried out to the removal method of resin, the processing method that the influence on [from a pollution problem] environment is small is demanded these days. Conventionally, although vinyl chloride system resin is used for the subject by the compound aluminum sash, to generating of the dioxin which poses a problem in incineration processing of vinyl chloride system resin, by processing in non-oxygen environment, the technology in which generating of dioxin can be prevented is established by it and it is applied to it in the waste disposal plant etc. Therefore, in the compound aluminum sash of vinyl chloride system resin, recycling that detoxication processing of vinyl chloride system resin is attained, and recovery of aluminum is performed using the collected aluminum sash has come to be established.

[0003]

[Problem to be solved by the invention] However, it is necessary with diversification of resin in a compound aluminum sash to perform the detoxication processing method of resin individually according to the kind of resin. For this reason, with a large garbage processing institution, since detoxication processing of the specific resin currently used for the compound aluminum sash differs in the state of the resin residual substance which remains in the aluminum sash after processing depending on the kind of resin even if it becomes possible, the problem that the quality of the aluminum collected will deteriorate produces it. [in the case of the urethane system resin especially used for a heat insulation sash / processing in the non-oxygen environment which is applied in the case of the compound aluminum sash of vinyl chloride system resin] Since there were many residual substances which remain in the aluminum sash after processing, the quality of the aluminum collected deteriorated and there was a danger that harmful gas would occur further at the time of aluminum sash recycling. this invention was made in view of this situation, and uses scrap wood recycling equipment of one compound aluminum sash -- vinyl chloride system resin and urethane system resin -- it is applicable also to processing of the scrap wood of the compound aluminum sash of which type -- [it is harmless and] And it aims at being safe processing, and quality aluminum recovery being possible, namely, offering the scrap wood recycling method of the compound aluminum sash which enabled coexistence of the request from an environmental side and a quality side, and its equipment.

[0004]

[Means for solving problem] [the scrap wood recycling method of the compound aluminum sash concerning this invention in alignment with said purpose] In the method of dry distillation processing mainly removing a resinous principle from a compound aluminum sash, and collecting the aluminum scrap wood contained When said resinous principle makes vinyl chloride system resin a subject, it dry-distills by non-oxygen environment. When said resinous principle makes urethane system resin a subject, after dry-distilling by non-oxygen environment at first, introducing inactive gas after the completion of dry distillation, and in a system and exhausting the remains cracked gas in this system, oxygen or air is introduced in this system, it switches to owner oxygen environment, and combustion removal of the resin residual substance is carried out. this -- vinyl chloride system resin and urethane system resin -- quality aluminum recovery is attained also to the scrap wood of the compound aluminum sash of which type. Moreover, the danger of explosion by inflammable remains cracked gas disappears. Moreover, in the scrap wood recycling method of the compound aluminum sash concerning this invention, when said resinous principle makes vinyl chloride system resin a subject, after removing hydrogen chloride, chlorine, and oil which are contained from the cracked gas which occurs at the time of dry distillation, combustion processing of the cracked gas can be carried out, and it can also emit to the atmosphere. When generating of dioxin can be prevented and said resinous principle makes urethane system resin a subject on the other hand by this Direct combustion processing of the cracked gas which occurs at the time of dry distillation can be carried out, it can also emit to the atmosphere through a water shower further, and this can remove the danger of generating of harmful gas at the time of aluminum sash recycling.

[0005] [scrap wood recycling equipment of the compound aluminum sash concerning this invention in alignment with said purpose] The thermal cracking room which stores the scrap wood of the compound aluminum sash containing the resinous principle which was equipped with the source of heating and stored by the cassette container, When it connects with said thermal cracking room and said resinous principle makes vinyl chloride system resin a subject When said thermal cracking room is blockaded, it changes into a non-oxygen state and said resinous principle makes urethane system resin a subject The change valve which changes said thermal cracking room into a non-oxygen state at first, and is changed into an owner oxygen state after the end of dry distillation, The inactive gas feed unit connected to the change valve for inactive gas supply filled with inactive gas at said thermal cracking room before said owner oxygen state in case said resinous principle makes urethane system resin a subject, and this change valve for inactive gas supply, When it connects with the outlet of the cracked gas of said thermal cracking room and said resinous principle makes vinyl chloride system resin a subject The neutralization equipment from which the oil contained by lowering the temperature of this cracked gas is removed while performing neutralization processing of said cracked gas, Deodorization equipment equipped with the water shower which carries out water cooling of the exhaust gas from the cracked gas combustion furnace which carries out combustion processing of the cracked gas emitted directly through said neutralization equipment, and this cracked gas combustion furnace, and when said resinous principle is urethane system resin It has the bypass valve which leads the cracked gas from said thermal cracking room to said deodorization equipment directly without minding said neutralization equipment. using scrap wood recycling equipment of one compound aluminum sash by this -- vinyl chloride system resin and urethane system resin -- the danger of explosion by inflammable remains cracked gas also disappears possible [detoxication processing in which it can respond] also to processing of the scrap wood of the compound aluminum sash of which type.

[0006]

[Mode for carrying out the invention] Then, it explains per form of the operation which materialized this invention, and an understanding of this invention is presented. It is the key map of scrap wood recycling equipment of the compound aluminum sash which drawing 1 requires for the form of 1 operation of this invention here. [the scrap wood recycling equipment 10 of the compound aluminum sash concerning the form of 1 operation of this invention] as shown in drawing 1 Dry distillation equipment 11 equipped with the thermal cracking room 14 which stores the scrap wood of a compound aluminum sash and carries out dry distillation processing of the resinous principle in the scrap wood of a compound aluminum sash, When a resinous principle makes vinyl chloride system resin a subject, while drawing the cracked gas containing hydrogen chloride and gaseous chlorine which occurred from dry distillation equipment 11, oil, etc. and performing neutralization processing of hydrogen chloride and chlorine When the cracked gas emitted from the neutralization equipment 20 from which oil is removed, and neutralization equipment 20, or a resinous principle makes urethane system resin a subject, the cracked gas which occurred at the thermal cracking room 14 is made to flow directly, and it has deodorization equipment 26 which deodorizes cracked gas. These are explained in detail hereafter.

[0007] (1) [the dry distillation equipment 11 of the scrap wood recycling equipment 10 of the compound aluminum sash concerning this invention] as shown in dry distillation equipment 11 drawing 1 The cassette containers 13, such as a rotary type which stores the scrap wood of a compound aluminum sash, Storage of the cassette container 13, and the thermal cracking room 14 used as the container equipped with the door for extraction which is not illustrated which can be sealed, It has the source 12 of heating which can use a heating means to supply heat carriers, such as high temperature gas formed in electric heating means to heat the thermal cracking room 14, such as a combustion burner, and an electric heater, an induction-heating coil, or the exterior, etc. moreover, [the thermal cracking room 14 / the atmosphere of the thermal cracking room 14] when a resinous principle makes vinyl chloride system resin a subject When the thermal cracking room 14 is blockaded, the atmosphere of the thermal cracking room 14 is changed into a non-oxygen state and a resinous principle makes urethane system resin a subject, the thermal cracking room 14 is changed into a non-oxygen state at first, and it has oxygen or the change valve 15 for air introduction changed into an owner oxygen state after the end of dry distillation.

[0008] However, in the system after dry distillation (inside of the thermal cracking room 14), low-boiling point hydrocarbon gas, such as methane, ethylene, propane, propylene, and butane, the high-boiling point hydrocarbon gas which is an oil ingredient, and the cracked gas which contained aromatic series gas further remain. When oxygen is introduced into the atmosphere in which such residual gas exists, there is still danger of explosion. So, before introducing oxygen, the change valve 31 for inactive gas supply with which inactive gas is made filled in a system, and the inactive gas feed unit 32 linked to the change valve 31 for inactive gas supply are formed in the thermal cracking room 14 of the dry distillation equipment 11 of this invention. Moreover, when a resinous principle makes vinyl chloride system resin a subject, after the end of dry distillation, it divides into the outlet 17a for discharging the residual substance which remains in the thermal cracking room 14, and the thermal cracking room 14 is equipped with the valve 17. furthermore, [the piping 18 which connects the outlet 16 for the cracked gas of the thermal cracking room 14, and the cracked gas inflow mouth 21 of neutralization equipment 20] The partition valve 18a which prevents that cracked gas flows into the neutralization equipment 20 for making the cracked gas which occurred by dry distillation flow into direct deodorization equipment 26,

without minding neutralization equipment 20 when a resinous principle is urethane system resin, The bypass piping 19a is formed and the bypass valve 19 is further formed in the bypass piping 19a.

[0009] (2) [the neutralization equipment 20 of the scrap wood recycling equipment 10 of the compound aluminum sash concerning this invention] as shown in neutralization equipment 20 drawing 1 The cracked gas inflow mouth 21 to which the piping 18 into which the cracked gas containing hydrogen chloride and gaseous chlorine which occurred in the thermal cracking room 14 by dry distillation when a resinous principle made vinyl chloride system resin a subject, oil, etc. is made to flow was connected, The neutralization liquid shower 22 for carrying out neutralization removal of hydrogen chloride in the cracked gas which flowed, and the chlorine by the shower of the alkaline solution which melted calcium carbonate, sodium hydroxide, etc. in water, The alkaline solution tank 23 which has the function as a cooling filter to remove the oil whose high-boiling point hydrocarbon which lowers the temperature of cracked gas and is contained in cracked gas while storing the alkaline solution for neutralization processing is an ingredient, It has the oil separating system 24 for alkaline solution purification which removes and makes usable repeatedly the oil collected in the alkaline solution tank 23 and which can use a filter, a centrifuge, etc., and the injection hole 25 where the cracked gas from which hydrogen chloride, gaseous chlorine, and oil were removed is emitted. In addition, the alkaline solution tank 23 also has the function which carries out the seal of the atmosphere of the thermal cracking room 14.

[0010] (3) [the deodorization equipment 26 of the scrap wood recycling equipment 10 of the compound aluminum sash concerning this invention] as shown in deodorization equipment 26 drawing 1 [vinyl chloride resin / in the case of scrap wood processing / a compound aluminum sash / made into a subject] Methane, the ethylene, propane, propylene which were emitted from neutralization equipment 20, [the cracked gas having contained various low-boiling point hydrocarbon gas, such as butane, / urethane resin / in the case of scrap wood processing / a compound aluminum sash / made into a subject] again Are discharged through the bypass valve 19 from the thermal cracking room 14 of dry distillation equipment 11. The cracked gas inflow mouth 27 with which the gas of high-boiling point hydrocarbon which is low-boiling point hydrocarbon gas and oil ingredients, such as methane, ethylene, propane, propylene, and butane, and the cracked gas which contained aromatic series gas further flow, The heating machine style 29 which can use a heating means to supply heat carriers, such as high temperature gas formed in electric heating means, such as a combustion burner, and an electric heater, an induction-heating coil, or the exterior, etc. is used. It has the cracked gas combustion furnace 28 with which combustion of the cracked gas which flowed, and decomposition are performed, and the water shower 30 which carries out water cooling of the exhaust gas discharged from the cracked gas combustion furnace 28.

[0011] Then, the scrap wood recycling method of the compound aluminum sash concerning the form of 1 operation of this invention is explained in detail. First, in the case of the scrap wood of the compound aluminum sash which makes vinyl chloride system resin a subject, the cassette container 13 with which the scrap wood of the compound aluminum sash was stored is stored in the thermal cracking room 14. From the thermal cracking room 14, close the change valve 15, the partition valve 17 of the outlet 17a of a residual substance, and the bypass valve 19, exhaust oxygen leading to [of dioxin] generation beforehand using the exhaust which is not illustrated, and as non-oxygen environment The thermal cracking room 14 is heated by the source 12 of heating after that, and dry distillation processing is started. Removing oxygen made atmosphere of the thermal cracking room 14 non-oxygen environment, and it is for promoting a desalination-ized hydrogen reaction, without generating dioxin. The cracked

gas which occurs then is made to flow into neutralization equipment 20 from the cracked gas inflow mouth 21 through the outlet 16 of the thermal cracking room 14 to the piping 18. It is for processing an ingredient harmful to human bodies, such as hydrogen chloride gas in the cracked gas used as the generation materials of dioxin, and gaseous chlorine, at an early stage to make the cracked gas which occurred discharge from the thermal cracking room 14.

[0012] First the cracked gas made to flow into neutralization equipment 20 [with the neutralization liquid shower 22] While passing the inside of the alkaline solution tank 23 which hydrogen chloride in cracked gas and chlorine are removed by counteraction with alkaline solution, then is storing the alkaline solution for neutralization processing for cracked gas and lowering the temperature of cracked gas, the oil contained in cracked gas is removed. The cracked gas from which hydrogen chloride, chlorine, and oil were removed is made to flow into deodorization equipment 26 from the injection hole 25 of neutralization equipment 20. Since the various low-boiling point hydrocarbon gas which was not able to be removed by the alkaline solution tank 23, such as methane, ethylene, propane, propylene, and butane, is contained in the cracked gas made to flow into deodorization equipment 26, In the cracked gas combustion furnace 28, the heating machine style 29 is used, it burns and the various low-boiling point hydrocarbon gas in these cracked gas is decomposed. The exhaust gas which occurred is emitted to the atmosphere.

[0013] On the other hand, if dry distillation is started in the state of owner oxygen, it goes up rapidly, and the cracked gas which occurred burns and the temperature of the scrap wood of a compound aluminum sash makes it in the case of the scrap wood of the compound aluminum sash which makes urethane system resin a subject, to oxidize an aluminum sash to a degree very much, or dissolve. Moreover, the danger of explosion by rapid combustion is also produced depending on the case. For this reason, the cassette container 13 with which the scrap wood of the compound aluminum sash was stored is stored in the thermal cracking room 14. The change valve 15, the partition valve 17 of the outlet 17a of a residual substance, and the partition valve 18a of the piping 18 which prevents that cracked gas flows into neutralization equipment 20 are closed, the bypass valve 19 is opened, the thermal cracking room 14 is heated by the source 12 of heating, and dry distillation processing is started. Although the atmosphere of the thermal cracking room 14 is owner oxygen environment for the air to which it existed in the thermal cracking room 14 immediately after the dry distillation start Since oxygen is gradually consumed with advance of thermal cracking, in the stage where dry distillation advances notably, the thermal cracking room 14 serves as non-oxygen environment, and when dry-distilling the scrap wood of the compound aluminum sash which makes urethane system resin a subject, it does not produce a problem at all.

[0014] The cracked gas which occurs at this time is discharged from the outlet 16 of the thermal cracking room 14. It is conveyed to deodorization equipment 26 through the bypass valve 19, and in the cracked gas combustion furnace 28, the heating machine style 29 is used, it burns and the gas of high-boiling point hydrocarbon which is low-boiling point hydrocarbon gas and oil ingredients, such as methane, ethylene, propane, propylene, and butane, and the cracked gas which contains aromatic series gas further are decomposed. It is cooled through the water shower 30 and the exhaust gas which occurred is emitted to the atmosphere. [in addition, the Reason for conveying the cracked gas which occurred to direct deodorization equipment 26 through the bypass valve 19 in processing of the scrap wood of the compound aluminum sash which makes urethane system resin a subject] It is because the efficiency of gas transportation will fall very much if an alkaline solution tank is passed like the case of

vinyl chloride system resin, since cracked gas and combustion gas occur [urethane system resin] so much as compared with vinyl chloride system resin.

[0015] In the case of scrap wood of the compound aluminum sash which makes urethane system resin a subject, after dry distillation processing is completed, on an aluminum sash, the carbon residual substance of the shape for example, of Taal etc. has adhered for the peculiar characteristic originating in the molecular structure of urethane resin. For example, since harmful gas will occur at the time of aluminum sash recycling or the purity of the aluminum collected will fall if the Taal-like carbon residual substance etc. has adhered, it is not desirable. For this reason, it is necessary to carry out combustion removal of the carbon residual substance of the shape of Taal of the surface of an aluminum sash.

However, at this time, in the thermal cracking room 14 after dry distillation, as mentioned above, explosive cracked gas is full. Then, the change valve 31 for inactive gas supply is opened, inactive gas is introduced in a system from the inactive gas feed unit 32, and remains cracked gas is exhausted. Next, close the change valve 31 for inactive gas supply, stop the inactive gas feed unit 32, open oxygen or the change valve 15 for air introduction, introduce oxygen or air in the thermal cracking room 14, and the inside of the thermal cracking room 14 is changed to owner oxygen environment. Combustion removal of the carbon residual substance of the shape of Taal of the surface of an aluminum sash is carried out. It is burned and decomposed by the heating machine style 29 in the cracked gas combustion furnace 28 of deodorization equipment 26, is cooled through the water shower 30, and the exhaust gas which occurs at this time is emitted to the atmosphere.

[0016] Then, it explains in more detail about the scrap wood recycling method of the compound aluminum sash using the scrap wood recycling equipment 10 of the compound aluminum sash of this invention.

(1) In scrap wood recycling of the compound aluminum sash of vinyl chloride system resin, store the scrap wood of the compound aluminum sash of vinyl chloride system resin in the rotary type cassette container 13. This cassette container 13 was stored in the thermal cracking room 14, the door of the thermal cracking room 14, the change valve 15, the partition valve 17, and the bypass valve 19 were closed, and the thermal cracking room 14 was sealed. After exhausting the inside of the thermal cracking room 14 using the exhaust which is not illustrated, the burner was lit, the inside of the thermal cracking room 14 was heated at about 300-500 degrees C, and dry distillation processing was performed, rotating the rotary type cassette container 13.

[0017] The cracked gas which occurs at this time was made to flow into neutralization equipment 20 from the cracked gas inflow mouth 21 through the outlet 16 of the thermal cracking room 14 to the piping 18. With neutralization equipment 20, first, the neutralization city water solution which distributed calcium carbonate passed the inside which falls in the shape of a shower, and removed hydrogen chloride and chlorine in cracked gas by counteraction. Then, while passing the inside of the alkaline solution tank 23 by which the neutralization city water solution which distributed calcium carbonate is stored in cracked gas and lowering the temperature of cracked gas, oil was melted and collected in water. The filter recovered the oil in the solution of calcium carbonate, and the solution of the purified calcium carbonate was returned to the alkaline solution tank 23. The cracked gas from which oil was removed was made to flow in the cracked gas combustion furnace 28 in the deodorization equipment 26 set as 900-1000 degrees C by burner heating, it burned and decomposed and the produced exhaust gas was emitted to the atmosphere. When heating of the thermal cracking room 14 is stopped after the end of dry distillation processing and the temperature of the thermal cracking room 14 falls at

180 degrees C or less below in dioxin generation temperature The residual substances which opened the partition valve 17 and have been deposited in the thermal cracking room 14 were collected, the door of the thermal cracking room 14 was opened, the rotary type cassette container 13 was taken out, and the aluminum sash scrap wood from which the resinous principle was removed was collected from the cassette container 13.

[0018] (2) In scrap wood recycling of the compound aluminum sash of urethane system resin, the scrap wood of the compound aluminum sash of urethane system resin was stored in the rotary type cassette container 13, this cassette container 13 was stored in the thermal cracking room 14, and the door of the thermal cracking room 14 was shut. Oxygen or the change valve 15 for air introduction, the change valve 31 for inactive gas supply, and the partition valves 17 and 18a were closed, the bypass valve 19 was opened, the burner was lit, the inside of the thermal cracking room 14 was heated at 300-500 degrees C, and dry distillation processing was performed, rotating the rotary type cassette container 13. The bypass valve 19 is minded for the cracked gas which occurs at this time from the outlet 16 of the thermal cracking room 14. From the cracked gas inflow mouth 27 of deodorization equipment 26, it introduced in the cracked gas combustion furnace 28 set as 800-1000 degrees C by burner heating, and it burned and decomposed, the produced exhaust gas was cooled in the water shower 30, and it emitted to the atmosphere.

[0019] The temperature of the thermal cracking room 14 is set as 500 degrees C after the end of dry distillation processing, the change valve 31 for inactive gas supply is opened, inactive gas is introduced into the thermal cracking room 14 from the inactive gas feed unit 32, and the inside of the thermal cracking room 14 is purged with inactive gas. The quantity which introduces the inactive gas at this time is enough if it introduces about 3 times to the effective volume of the thermal cracking room 14. Next, the change valve 31 for inactive gas supply was closed, the inactive gas feed unit 32 was stopped, oxygen or the change valve 15 for air introduction was opened, air was introduced into the thermal cracking room 14, the Taal-like carbon residual substance (resin residual substance) which adhered on the aluminum sash was burned, and it removed. The exhaust gas which occurs at this time passes the same course as the time of dry distillation processing, and is conveyed to deodorization equipment 26. With deodorization equipment 26, exhaust gas was introduced in the cracked gas combustion furnace 28 set as 800-1000 degrees C by burner heating, and it burned and decomposed further, and it cooled in the water shower 30 and the produced exhaust gas was emitted to the atmosphere. When heating of the thermal cracking room 14 is stopped after completing the Taal-like removal [carbon residual substance] which adhered on the aluminum sash and the temperature of the thermal cracking room 14 turns into below poisonous substance generation temperature The door of the thermal cracking room 14 was opened, the rotary type cassette container 13 was taken out, and the aluminum sash scrap wood from which the resinous principle was removed was collected from the cassette container 13.

[0020]

[Effect of the Invention] In the scrap wood recycling method of a compound aluminum sash given in Claims 1 and 2 In the method of dry distillation processing mainly removing a resinous principle from a compound aluminum sash, and collecting the aluminum scrap wood contained When a resinous principle makes vinyl chloride system resin a subject, it dry-distills by non-oxygen environment. Since explosion takes place, there will be a danger that equipment will be destroyed, or temperature will go up and oxidization and the dissolution of aluminum will take place, if it dry-distills by non-oxygen environment and cracked gas is burned when a resinous principle makes urethane system resin a subject

After fully discharging the cracked gas which changes to inactive gas atmosphere and has inflammability after the completion of dry distillation and securing safe operation by switching to owner oxygen environment and carrying out combustion removal of the resin residual substance vinyl chloride system resin and urethane system resin -- quality aluminum recovery is attained also to the scrap wood of the compound aluminum sash of which type.

[0021] It sets especially to the scrap wood recycling method of a compound aluminum sash according to claim 2. When a resinous principle makes vinyl chloride system resin a subject Since combustion processing of the cracked gas is carried out and it emits to the atmosphere, after removing hydrogen chloride, chlorine, and oil which are contained from the cracked gas which occurs at the time of dry distillation Since direct combustion processing of the cracked gas which occurs at the time of dry distillation is carried out and it emits to the atmosphere through a water shower further when generating of dioxin can be prevented and a resinous principle makes urethane system resin a subject, the danger of explosion by the rapid combustion under owner oxygen environment is avoidable.

[0022] In scrap wood recycling equipment of a compound aluminum sash according to claim 3 The thermal cracking room which dry-distills by storing the scrap wood of the compound aluminum sash containing a resinous principle, When a resinous principle makes vinyl chloride system resin a subject, a thermal cracking room is changed into a non-oxygen state. Oxygen or the change valve for air introduction, and the change valve for inactive gas supply which are changed into an owner oxygen state after changing a thermal cracking room into a non-oxygen state at first and changing into an inactive gas atmosphere state after the end of dry distillation, when a resinous principle makes urethane system resin a subject, The neutralization equipment from which the oil contained in neutralization processing of cracked gas and cracked gas when a resinous principle makes vinyl chloride system resin a subject is removed, It has the deodorization equipment of the cracked gas emitted directly, and the bypass valve which leads the cracked gas from a thermal cracking room to direct deodorization equipment without minding neutralization equipment when a resinous principle is urethane system resin through neutralization equipment. using scrap wood recycling equipment of one compound aluminum sash by this -- vinyl chloride system resin and urethane system resin -- detoxication processing can be safely performed also to processing of the scrap wood of the compound aluminum sash of which type that it can respond.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the key map of scrap wood recycling equipment of the compound aluminum sash concerning the form of 1 operation of this invention.

[Explanations of letters or numerals]

Scrap wood recycling equipment of a compound aluminum sash, 11:dry distillation equipment, 12 : 10: The source of heating, A cassette container, 14:thermal cracking room, 15:change valve, 16 : 13: An outlet, A partition valve, a 17a:outlet, 18: piping, 18a : 17: A partition valve, A bypass valve, 19a:bypass piping, 20:neutralization equipment, 21 : 19: A cracked gas inflow mouth, 22: A neutralization liquid shower, 23:alkalinity solution tank, 24:oil separating system, 25:injection hole, 26:deodorization equipment, 27:cracked gas inflow mouth, 28:cracked gas combustion furnace, 29:heating machine style, 30:water shower, the change valve for 31:inactive gas supply, 32 : inactive gas feed unit

[Translation done.]